



Affordable and Trusted Cable Gland Types by Exgrip



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In the world of electrical systems, cable glands are small but critical parts. They are used to connect electrical cables to machines, control panels, or enclosures. There are many different cable gland types, and choosing the right one is very important for safety, durability, and performance.

Whether you're installing cables in a factory, a data center, or a power station, the correct type of cable gland will help protect the cable from damage, stop dust and water from entering the equipment, and ensure the connection stays strong for years

Cable Gland Types

A cable gland (also called a *cable connector*) is a device that helps to secure and seal the end of a cable where it enters a piece of equipment. It

holds the cable in place, protects it from stress, and keeps out dust, water, and other harmful elements.

There are many different types of cable glands. Some are made for indoor use, some for outdoor, some for armoured cables, and some for hazardous areas. Understanding these differences helps you choose the right one for your application.

You may also come across terms like:

- Types of electrical cable glands
- Cable gland type and size
- Armoured cable gland types
- Or even downloadable specs like “[cable gland types PDF](#)”

Each of these refers to the many styles and standards that help define which gland is best for each job.

Why Are Cable Glands Important?

No matter the environment industrial, commercial, or domestic cable glands play an important role in safety and cable management.

Here's why different cable gland types are necessary:

They Secure the Cable :

Machines move. People tug on wires. Vibration happens. Cable glands grip the cable tightly so it doesn't slip, twist, or disconnect over time.

They Block Entry of Dust and Water :

If water, dust, oil, or chemicals enter a control panel, it can cause short circuits or equipment failure. Cable glands seal the entry point and keep everything safe inside.

They Protect the Cable from Strain :

Cables often bend or get pulled during use. Cable glands offer strain relief, which means they take the tension instead of the cable getting damaged.

They Are Made for Different Environments :

Some cable glands are explosion-proof, some are marine-grade, and others are made for high heat or corrosive areas. That's why different cable gland types exist each type is made for a special job.

Where Are Cable Glands Used?

Cable glands are used anywhere electrical cables connect to equipment — in simple setups or in large industrial installations.

- Commercial buildings
- Manufacturing factories
- Oil & Gas refineries
- Power distribution systems
- Telecom towers and data centers
- Trains and transportation systems
- Water and wastewater treatment plants

Each of these industries often requires specific electrical cable gland types to meet safety and environmental standards.

Different Cable Gland Types

Different environments need different materials. Below are the most common materials used in various types of electrical cable glands:

Material	Used For	Benefits
Brass	General industry, control panels	Strong, corrosion-resistant, conducts electricity well

Stainless Steel	Marine, food & chemical industry	Rust-proof, durable, suitable for harsh environments
Aluminum	Lightweight machinery	Lightweight, good conductor, rust-resistant
Plastic/Nylon	Indoor & telecom applications	Non-conductive, affordable, corrosion-resistant

Each cable gland type and size is often matched not just by diameter but also by material depending on the installation area.

Standard Cable Gland Types Explained (A1 to E2)

When selecting the right cable gland, it's not just about size and material — it's also about choosing the correct gland type based on how the cable is built and where it will be used.

The BS 6121 standard gives us a clear system to categorize and understand these different **cable gland types**. Each type has a name like A1, A2, B, C, D1, etc., and each one is made for a specific type of cable and installation environment.

What is BS 6121?

BS 6121 is a British Standard that describes how cable glands should be designed, tested, and used. Even though newer standards have replaced it in some regions, many manufacturers still follow BS 6121 designations when naming their electrical cable gland types.

Let's explore each type below in simple language.

Type A Cable Glands (A1, A2, A3, A4)

Type A glands are designed for unarmoured cables — which means cables without any metal armor or wire protection. These are the most basic types of cable glands, often used in general indoor or outdoor electrical work.

Type	Description
A1	Used for unarmoured cables. Plastic gland. Provides basic grip and sealing. Rated IP4X. Not waterproof.
A2	Similar to A1 but includes a better seal (IP68), offering water and dust protection. Made from plastic or brass.
A3	Like A1, but also includes an electrical bond for cables that have a metal layer inside.
A4	Like A2, but with an added electrical bond for inner metal sheaths. Suitable for more complex connections.

Type B Cable Glands

Type B glands are built for single-wire armoured cables. These glands help lock the metal armour and also allow for electrical continuity meaning they make a connection between the cable's armour and the machine or enclosure.

Type	Description
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B	Provides mechanical grip on the armour and ensures the metal armour is grounded (electrically connected). Made from brass. Designed for dry, indoor use. Rated IP30.
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Type C Cable Glands

Type C glands are similar to Type B but come with a stronger IP68-rated seal, making them weatherproof and waterproof. These are perfect for places where moisture or dust is a concern.

Type	Description
C	For armoured or braided cables with rubber or plastic sheaths. Includes separate armour locking ring and high-quality outer seal. Made from brass or stainless steel. Rated IP68.

Type D Cable Glands (D1, D2)

These are heavy-duty **armoured cable gland types** designed for more complex sealing needs. They offer an additional seal on the inner cable sheath, not just the outer sheath.

Type	Description
D1	For armoured or braided cables. Seals both inner sheath and threaded fixing part. Strong protection from water/dust. IP68 rated.

D2	Same as D1 but includes an electrical bond for the metallic inner sheath. Suitable for cables with metal inside.
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Type E Cable Glands (E1, E2)

These are among the most advanced types of electrical cable glands, offering dual seals (inner + outer) and suitable for extreme conditions.

Type	Description
E1	Seals the bedding layer and outer sheath of the cable. Comes with an armour locking ring. High level of water and dust protection. Rated IP68.
E2	Same as E1 but with an electrical bond for cables that have an internal metallic sheath.

Special Application-Based Cable Gland Types

While standard cable gland types (like A1, B, C, D1, etc.) are commonly used in most installations, some industries require special cable glands made for unique environments. These include places with fire risk, electromagnetic interference, underwater exposure, or high-voltage systems.

In this part, we'll explain special-purpose cable gland types such as:

- EMC Cable Glands
- Marine Cable Glands
- Fire-Stop Cable Glands
- Electric Cable Glands
- Flexible Hose Glands

- PVC Glands

These types are extremely important in industries like telecommunications, marine, transportation, power plants, and chemical processing.

EMC Cable Glands (Electromagnetic Compatibility)

In environments where electronic machines, computers, or telecom equipment are used, electromagnetic interference (EMI) can cause serious disruptions. EMI can affect the performance of sensitive devices and even damage them.

Marine Cable Glands

The marine industry has tough environments: salty air, water spray, pressure changes, and corrosion. Cables used on ships, docks, and offshore platforms need extra protection. That's where marine cable glands come in.

Fire-Stop Cable Glands

Some environments face high fire risks, such as railways, underground tunnels, factories, or emergency systems. In such cases, you need cable glands that can contain fire, reduce smoke spread, and keep electrical systems functioning during emergencies.

Electric Cable Glands

Some cable glands are made specifically for high-voltage power cables. These are often used in power transmission, substations, and electrical panels. They're also called earthing cable glands because they safely handle electricity leaks.

Flexible Hose Glands

Some machines move, vibrate, or generate heat, and they need flexible connections. A flexible hose gland connects the cable to the machine while allowing some movement and heat resistance.

PVC Cable Glands

These are lightweight, cost-effective glands used mostly for instrumentation and low-voltage control cables. They are not suitable for harsh conditions but work perfectly in indoor, dry, or dust-free environments.

Summary of Special-Purpose Cable Gland Types

Type	Main Purpose	Best For
EMC Gland	Blocks electromagnetic interference	Telecom, automation, data centers
Marine Gland	Waterproof and corrosion-resistant	Ships, docks, wastewater plants
Fire-Stop Gland	Fire containment and smoke resistance	Railways, emergency systems
Electric Gland	Provides safe grounding	High-voltage systems, industrial panels
Flexible Hose Gland	Allows movement and absorbs vibration	Moving machinery, heat-generating equipment

PVC Gland	Low-cost, indoor cable protection	Telecom, control panels, low-voltage systems
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Material & Compatibility in Cable Gland Type

Always match your gland material with the environmental risks especially water, chemicals, or movement.

Armoured cable gland types must be chosen based on the armour layer choosing the wrong suffix can lead to poor connection, safety issues, or gland failure.

If in doubt, go with brass or stainless steel and select the correct suffix (W, T, X, Y, Z) for the cable armour.

Trusted. Certified. Affordable. Get Every Type of Cable Gland at Exgrip.

Exgrip is a trusted and certified cable gland manufacturer offering high-quality products at the most affordable prices.

We supply all types of cable glands including brass, stainless steel, aluminum, plastic, armoured, flameproof, waterproof, EMC, and more for every industrial need.

If you're looking for any type of cable gland, contact us today at [Exgrip.com](https://www.exgrip.com). We'll help you find the perfect solution fast, safe, and cost-effective.